

LISTING OF CLAIMS:

1. (Currently amended) A vibration type angular velocity sensor comprising:

 a vibrator for vibrating in a driving axis direction upon application of an AC voltage thereto;

 a driving circuit for applying the AC voltage to the vibrator;

 a first detection circuit for producing a first signal corresponding to a displacement of the vibrator, which occurs in ~~a detection~~the driving axis direction ~~perpendicular to the driving axis direction~~ in response to the AC voltage;

 a second detection circuit for producing a second signal corresponding to ~~the first signal~~a displacement of the vibrator, the displacement occurring in a detection axis direction perpendicular to the driving axis direction; and

 an adjusting circuit for adjusting an amplitude of the first signal of the first detection circuit in the same phase or reverse phase,

 wherein the adjusting circuit applies the adjusted first signal to a first stage circuit part of the second detection circuit as a comparison reference signal of the second detection circuit.

2. (Currently amended) The vibration type angular velocity sensor according to claim 1, wherein:

 the vibrator includes at least a pair of arm portions disposed to face each other;

 the adjusting circuit includes at least a pair of adjusting circuits each producing the comparison reference signal in opposite phases;

the second detection circuit includes a plurality of amplifying circuits respectively provided as the first stage circuit part in connection with the pair of arm portions; and

the amplifying circuits of the second detection circuit are connected directly to detection electrodes of the arm portions supplied with the comparison reference signals which are adjusted to be reversed to each other by the adjusting circuit.

3. (Original) The vibration type angular velocity sensor according to claim 2, further comprising:

an offset circuit for adjusting the amplitude of a 90-degree phase-shifted first signal of the first detection circuit in the same phase or reverse phase; and

addition circuits to apply the comparison reference signals to the amplifying circuits of the second detection circuit by adding the adjusted first signals and adjusted phase-shifted first signals.

4. (Original) The vibration type angular velocity sensor according to claim 3, wherein the offset circuit adjusts, in the same phase or reverse phase, the amplitude of the AC signal to be applied from the driving circuit to the vibrator.

5. (Original) The vibration type angular velocity sensor according to claim 1, wherein the adjusting circuit includes a variable resistor for variably adjusting the comparison reference signal.

6. (New) The vibration type angular velocity sensor according to claim 2, wherein the second detection circuit further includes a differential circuit connected to outputs of the amplifying circuits and a filter circuit connected to the differential circuit.

7. (New) A vibration type angular velocity sensor comprising:

a vibrator means for vibrating in a driving axis direction upon application of an AC voltage thereto;

a driving circuit means for applying the AC voltage to the vibrator means

a first detection circuit means for producing a first signal corresponding to a displacement of the vibrator means, which occurs in the driving axis direction in response to the AC voltage;

a second detection circuit means for producing a second signal corresponding to a displacement of the vibrator means, the displacement occurring in a detection axis direction perpendicular to the driving axis direction; and

an adjusting circuit means for adjusting an amplitude of the first signal of the first detection circuit means in the same phase or reverse phase,

wherein the adjusting circuit means applies the adjusted first signal to a first stage circuit part of the second detection circuit means as a comparison reference signal of the second detection circuit means.

8. (New) The vibration type angular velocity sensor according to claim 7, wherein:

the vibrator means includes at least a pair of arm portions disposed to face each other;

the adjusting circuit means includes at least a pair of adjusting circuits each producing the comparison reference signal in opposite phases;

the second detection circuit means includes a plurality of amplifying circuits respectively provided as the first stage circuit part in connection with the pair of arm portions; and

the amplifying circuits of the second detection circuit means are connected directly to detection electrodes of the arm portions supplied with the comparison reference signals which are adjusted to be reversed to each other by the adjusting circuit means.

9. (New) The vibration type angular velocity sensor according to claim 8, further comprising:

an offset circuit means for adjusting the amplitude of a 90-degree phase-shifted first signal of the first detection circuit means in the same phase or reverse phase; and

addition circuits to apply the comparison reference signals to the amplifying circuits of the second detection circuit means by adding the adjusted first signals and adjusted phase-shifted first signals.

10. (New) The vibration type angular velocity sensor according to claim 9, wherein the offset circuit means adjusts, in the same phase or reverse phase, the amplitude of the AC signal to be applied from the driving circuit means to the vibrator.

11. (New) The vibration type angular velocity sensor according to claim 7, wherein the adjusting circuit means includes a variable resistor for variably adjusting the comparison reference signal.

12. (New) The vibration type angular velocity sensor according to claim 8, wherein the second detection circuit means further includes a differential circuit connected to outputs of the amplifying circuits and a filter circuit connected to the differential circuit.